CLAIM AMENDMENTS

A. Please use the following listing of claims.

1. (currently amended) An integrated biochemical sensor package comprising:

a platform;

a waveguide having an upper surface affixed to said platform, said waveguide having a thin layer of chemical coating affixed on said upper surface; ~~and~~

first and second reflective fixtures coupled to opposite extremes of said waveguide and touching said platform,

a light source within said package, said light source arranged to emit light towards said first reflective fixture; and

a detector within said package and near second reflective fixture.

2. (currently amended) The integrated biochemical sensor package according to Claim 1 further comprising:

a lead frame extending from said platform on a place parallel to said thin layer of coating;

a first dimple underlying said first reflective fixture;

~~a~~ said light source embedded in said first dimple and arranged to emit light outward towards said first reflective fixture~~; and~~

~~a detector means embedded in said platform and underlying said second reflective fixture~~.

3. (original) The integrated biochemical sensor package according to Claim 1 wherein said waveguide is made of a light transmissive material.

4. (original) The integrated biochemical sensor package according to Claim 2 wherein said lead frame has three pins extending outward from said platform.

5. (canceled).

6. (original) The integrated biochemical sensor package according to Claim 1 wherein said light source is a series combination of a diode and resistor.

7. (currently amended) The integrated biochemical sensor package according to Claim ~~2~~ 1 wherein said detector ~~means~~ is an photo diode amplifier chip.

8. (currently amended) The integrated biochemical sensor package according to Claim ~~2~~ 1 wherein said light source is a single high intensity light emitting diode.

9. (original) The integrated biochemical sensor package according to Claim 1 wherein said platform forms a substantially rectangular shaped enclosure for housing various sensor components.

10. (original) The integrated biochemical sensor package according to Claim 1 wherein said platform has a substantially trapezoidal shape.

11. (original) The integrated biochemical sensor package according to Claim 1 wherein said waveguide is integrally molded on said platform.

12. (currently amended) The integrated biochemical sensor package according to Claim ~~1~~ 2 further comprising a second dimple underlying said second reflective fixture wherein said detector ~~means~~ sits inside said second dimple.

13. (original) A miniaturized integrated biochemical sensor for indicating the presence of a given sample based comprising:

a sensor platform having a substantially rectangular box shape form, said platform having a substantially flat upper surface and at least one end;

a waveguide coupled to said upper surface of said platform, said waveguide having a first end and a second end opposite from one another;

a first reflective fixture coupled to said first end of said waveguide and touching said upper surface of said platform;

a second reflective fixture coupled to said second end of said waveguide and touching said upper surface of said platform;

a light source embedded in said platform under said first reflective fixture; and

a detector embedded in said platform opposite said light source about said one end of said platform and underlying said second reflective fixture.

14. (original) The miniaturized integrated biochemical sensor of Claim 13 wherein said light source is a light emitting diode.

15. (original) The miniaturized integrated biochemical sensor of Claim 13 further comprising:

a three-pin lead frame extending from said one end of said platform; and

a first dimple forming a substantially cup-shaped area on one pin of said lead frame and surrounding said light source under said first reflective fixture.

16. (canceled).

17. (original) The miniaturized integrated biochemical sensor of Claim 13 wherein a thin layer of chemical coating is deposited on said waveguide.

18. (currently amended) A sensor package suitable for biochemical sensing applications comprising:

a substantially rectangular device platform;

a light transmissive waveguide coupled to an upper surface of said platform and a surface with an indicator chemistry coat deposited thereon;

first and second reflective fixtures coupled to opposite ends of said waveguide about said platform;

a lead frame embedded in said platform and having a plurality of pins extending out from one end of said platform, said lead frame having a first dimple underlying said first reflective fixture and a second dimple underlying said second reflective fixture;

a light source sitting in said first dimple under said first reflective fixture; and

a detector ~~means~~ sitting in said second dimple under said second reflective fixture, said detector means configured about said platform to optically receive light from said light source via said first reflective fixture through said waveguide and then through said second reflective fixture.

19. (canceled).

20. (canceled).